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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,257	09/16/2003	Wolfgang Beilfuss	0503-1154	2873

466 7590 04/05/2011  
YOUNG & THOMPSON  
209 Madison Street  
Suite 500  
Alexandria, VA 22314

EXAMINER
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HAGOPIAN, CASEY SHEA

ART UNIT	PAPER NUMBER
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1617

NOTIFICATION DATE	DELIVERY MODE
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04/05/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

## Office Action Summary

Application No.

10/663,257

Applicant(s)

BEILFUSS ET AL.

Examiner

CASEY S. HAGOPIAN

Art Unit

1617

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18,21-25,30,31,36-40,42-44,48,57,58 and 60 is/are pending in the application.
- 4a) Of the above claim(s) 22,24 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18,21,23,30,31,36-40,42-44,48,57,58 and 60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2010 has been entered.

Claims 18, 42, 48 have been amended. Claims 35, 41 and 45-47 were cancelled. Claim 60 is newly added. Accordingly, claims 18, 21-25, 30, 31, 36-40, 42-44, 48, 57, 58 and 60 remain pending in the application. Claims 22, 24, 25 stand withdrawn from further consideration, with traverse. Claims 18, 21, 23, 30, 31, 36-40, 42-44, 48, 57-58 and 60 are currently under examination.

## **MAINTAINED REJECTIONS**

The following rejections have been maintained from the previous Office Action dated 8/31/2010:

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

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at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 18, 21, 30, 31, 36-40, 42-44, 48, 57 and 58 stand rejected and newly added claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beilfuss et al. (US 2001/0021711 A1) in view of Ecanow et al. (USPN 4,452,780). The rejection set forth on pages 4-6 of the previous Office action dated 8/31/2010 is maintained for reasons of record and the commentary set forth below.

Beilfuss et al. teaches a stable microbicidal composition comprising a) at least one bactericidal N-formal, b) at least one fungicide and c) at least one stabilizer (claim 1). A preferred bactericidal N-formal is 3,3'-methylenebis(5-methyloxazolidine) (paragraph [0019]; claim 3). Beilfuss et al. teaches the N-formal is present in a concentration of from 1 to 99% by weight, preferably from 10 to 95% by weight, more preferably 20 to 90% by weight, in particular 40 to 90% by weight (claim 4) and the fungicide is present in a concentration of from 0.1 to 99% by weight, preferably 2 to 40% by weight, in particular 5 to 10% by weight (claim 7). Said percentages read on the ratios claimed in instant claims 18 and 35. Beilfuss et al. teaches said composition is free from iodopropynyl compounds and derivatives of benzimidazole or thiophene (paragraph [0027]). Beilfuss et al. further teaches that additional additives may be included in the compositions such as solvents, solubility promoters and corrosion-protective agents (paragraphs [0023] and [0026]). Regarding instant claims 36-40, Beilfuss et al. teaches that the compositions are preferably anhydrous or have a low content of water (paragraph [0024]). It is noted that claims 37-39 contain the limitation, up to about X%. For instance, claim 37 limits the water content of the composition to be up to about 10%, which broadly reads on 0% or anhydrous. Regarding instant claims 42-44, 48 and 66, Example 3 exhibits a composition comprising 90% of the N-formal 3,3'-methylenebis(5-methyloxazolidine) and about 2.5% of a fungicide (paragraph [0050]). Beilfuss et al. also teaches the preferred solvent, phenoxyethanol as well as amounts of solvent utilized in the composition including less than 50% by weight,

preferably less than 35% by weight and in particular less than 25% by weight (claims 13 and 14).

It is noted that the instant claims are product claims and any intended use recitation such as “preservative” (all claims) or “is utilized for...” (claims 57 and 58) does not alone show patentable distinction. A recitation of intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. In other words, if the prior art structure is capable of performing the intended use, then it meets the claim.

Beilfuss et al. is silent to urea.

Ecanow et al. teaches a composition possessing powerful germicidal, antiseptic, fungicidal and bacteriacidal properties comprising an active agent selected from iodine, urea or an iodophore or any combination thereof (abstract; claim 1). Thus, Ecanow et al. generically teaches urea as a known agent effective against fungus.

One of ordinary skill in the art at the time of the invention would have been motivated to include urea as the “at least one fungicide” with a reasonable expectation that said urea would impart effective fungicidal properties. Thus, in Beilfuss et al. it would have been obvious at the time the invention was made to include the fungicide, urea, as suggested by Ecanow et al.

Beilfuss et al. is also silent to some of the particular percentage ranges claimed in the instant claims 43, 44, 48 and 60, however it would be within the knowledge of one skilled in the art to optimize a composition by way of routine experimentation. As

discussed above, Beilfuss et al. teaches the N-formal is present in a concentration of from 1 to 99% by weight, preferably from 10 to 95% by weight, more preferably 20 to 90% by weight, in particular 40 to 90% by weight (claim 4) and the fungicide is present in a concentration of from 0.1 to 99% by weight, preferably 2 to 40% by weight, in particular 5 to 10% by weight (claim 7). Example 3 exhibits a composition comprising 90% of the N-formal 3,3'-methylenebis(5-methyloxazolidine) and about 2.5% of a fungicide (paragraph [0050]). Beilfuss et al. also teaches the preferred solvent, phenoxyethanol as well as amounts of solvent utilized in the composition including less than 50% by weight, preferably less than 35% by weight and in particular less than 25% by weight (claims 13 and 14). Absent of unexpected results, a practitioner would have reasonably expected an optimized composition comprising 3,3'-(methylenebis(5-methyloxazolidine), urea and, if necessary, phenoxyethanol in the percentages claimed. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the composition and include the particular percentages claimed by applicant.

Claim 23 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Beilfuss et al. (US 2001/0021711 A1) in view of Ecanow et al. (USPN 4,452,780) and as evidenced by "Grotan BK" on chemindustry.com. The rejection set forth on pages 8-9 of the previous Office action dated 8/31/2010 is maintained for reasons of record and the commentary set forth below.

Beilfuss and Ecanow teach the elements discussed *supra* including a composition comprising “at least one bactericidal N-formal” such as 3,3'-methylenebis(5-methyloxazolidine). It is noted the phrase “at least one” implies one or more N-formal or combinations of N-formals. Beilfuss further teaches the particular formal Grotan BK or 2,2,2”-(hexahydro-1,3,5-triazine-1,3,5-triyl)tri-ethanol). In instant claim 23, the claims are now drawn to the combination of 3,3'-methylenebis(5-methyloxazolidine) and another formal such as N,N',N”-tris(hydroxyethyl)hexahydrotriazine which is a synonym of Grotan BK as evidenced by the Grotan BK informational page on chemindustry.com. Thus, Beilfuss teaches the particular combination of 3,3'-methylenebis(5-methyloxazolidine) and N,N',N”-tris(hydroxyethyl)hexahydrotriazine. Furthermore, as explained *supra* in the rejection under 35 USC 103 over the combination of Beilfuss and Ecanow, the combined teachings of Beilfuss and Ecanow and the evidence provided by chemindustry.com render the instant claim obvious.

### ***Response to Arguments***

Applicant's arguments filed 11/30/2010 have been fully considered but they are not persuasive.

Applicant argues that the combination of Beilfuss and Ecanow fails to render obvious the claimed invention for several reasons. First, applicant argues that Ecanow discloses an aqueous composition whereas Beilfuss teaches an anhydrous, or low water content composition and the urea is neither disclosed nor suggested as an



equivalent to the fungicides in Beilfuss for the same purpose. Applicant further argues there is a lack of equivalence because Ecanow teaches that urea is effective at 10-40% in the final product whereas Beilfuss discloses an effective amount of both fungicide and N-formal being 0.01-10% (pages 11-12 of Remarks).

In response, it is respectfully submitted that Beilfuss et al. teaches the N-formal is present in a concentration of from 1 to 99% by weight, preferably from 10 to 95% by weight, more preferably 20 to 90% by weight, in particular 40 to 90% by weight (claim 4) and the fungicide is present in a concentration of from 0.1 to 99% by weight, preferably 2 to 40% by weight, in particular 5 to 10% by weight (claim 7). Thus, the ranges argued by applicant are very narrow as compared to the broad disclosure of Beilfuss. A reference is relevant for all that it teaches not just preferred embodiment or examples. Ecanow further teaches including urea in an amount of 5-40% (col. 4, lines 61-62). Thus, contrary to applicant's assertions, the amount of urea taught in Ecanow overlaps with the amount of fungicide taught in Beilfuss. Furthermore, regardless of whether the compositions are aqueous or low water content formulations, it would have been obvious to one of ordinary skill in the art to try incorporating another known fungicide as suggested by Ecanow with a reasonable expectation of success because urea is taught to have known effective fungicidal properties and is effective against a broad array of pathogenic micro-organisms.

Applicant further argues that the combination of Beilfuss and Ecanow fails to teach the claimed range and reduction of formaldehyde (pages 12-13 of Remarks).

In response, it is respectfully submitted that as discussed above, Beilfuss and Ecanow teach generally the amounts of N-formal and fungicide/urea claimed. It is well within the knowledge of a skilled artisan to optimize a formulation by way of routine experimentation. MPEP 2144I.05(II)(A) states, that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. Beilfuss and Ecanow teach general as well as preferred ranges of N-formal and fungicide/urea. Thus, depending on the desired composition, it would have been obvious to one of ordinary skill at the time of the invention to utilize the teachings of Beilfuss and Ecanow and further discover the optimum or workable ranges by routine experimentation.

Applicant also argues that one would have been discouraged from adding urea to Beilfuss in light of Breyer and because Beilfuss teaches that there incompatibilities between N-formals and fungicides which can result in inadequate effectiveness.

(Remarks, pages 13-15).

In response, it is respectfully submitted that as discussed above, urea is taught by Ecanow as an effective fungicide. There is nothing in the art to support the notion that the particular N-formal claimed and urea would be incompatible or create an ineffective product. Thus, it would have been one of ordinary skill in the art at the time of the invention to try incorporating another known fungicide as suggested by Ecanow with a reasonable expectation of success because urea is taught to have known effective fungicidal properties and is effective against a broad array of pathogenic micro-organisms.

Thus, for these reasons, Applicant's arguments are found unpersuasive. Said rejections are maintained.

### ***Conclusion***

All claims have been rejected; no claims are allowed.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Casey Hagopian whose telephone number is 571-272-6097. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun G. Sajjadi, can be reached at 571-272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Casey S Hagopian/  
Examiner, Art Unit 1617

/Carlos A. Azpuru/

Primary Examiner, Art Unit 1617